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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/651,203	08/29/2003	Akihiro Sato	ASAIN0130	7623

24203 7590 02/28/2005

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EXAMINER

STONER, KILEY SHAWN

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 02/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/651,203

Applicant(s)

SATO ET AL.

Examiner

Kiley Stoner

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9-8-04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "satisfactory large" in claims 1-4 is a relative term which renders the claim indefinite. The term "satisfactory large" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear as to what is a satisfactory large heat capacity.

It is recommended by the examiner that the awkward language of "higher heat-resisting temperature" and "heat-resisting temperature" be changed to something like "thermal degradation temperature" or "melting or liquidus temperature".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Koromzay (4,841,117) of the IDS.

Koromzay teaches a jig mounting step (A) for installing a jig into the thin-walled portion of the workpiece to from a recess, wherein the jig is manufactured from a material with a higher heat-resisting temperature than the heat-resisting temperature of the molten metal and a satisfactorily large heat capacity, and the recess is to store the molten metal in a surfaced portion in the vicinity of the thin-walled portion of the workpiece (Figures); a preheating step (B) for preheating the workpiece and the jig to a predetermined temperature under the condition with the jig installed (column 2, lines 60-67); and build up welding step (C) for continually build up welding to the thin-walled portion of the workpiece and forming weld beads on a surfaced portion (Figures and columns 2-4).

It is inherent that the jig is manufactured from a material with a higher heat-resisting temperature than the heat-resisting temperature of the molten metal, otherwise the jig would melt during the build up welding process.

It is also inherent that the jig is removed after the weld beads solidify completely so that the weldment has a chance to form the desired shape upon cooling.

Furthermore, it is inherent that jig of Koromzay will reduce the cooling rate at the thin-walled portion after the build up welding process.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koromzay (4,841,117) as applied to claim 1 above, and further in view of Kano et al. (US-2001/0003334). Koromzay teaches all of the limitations of the claims except the jig is ceramic.

Kano et al. teaches the jig is ceramic (entire document).

At the time of the invention it would have been obvious to one of ordinary skill in the art to use a ceramic jig as taught by Kano et al. in the process of Foster et al. because ceramics have a high thermal degradation temperature.

Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koromzay (4,841,117) as applied to claim 1 above, and further in view of Foster et al. (6,054,672). Koromzay teaches all of the limitations of the claims except that the workpiece is a TiAl alloy and the thin-walled portion of the workpiece is the tip of a turbine blade.

Foster et al. teaches the workpiece is a TiAl alloy and the thin-walled portion of the workpiece is the tip of a turbine blade (claims 2, 5 and 11).

At the time of the invention it would have been obvious to one of ordinary skill in the art to use the jig of Koromzay with the workpiece of Foster et al. because both patents are drawn to the repair of turbine blades using build up welding.

Allowable Subject Matter

Claim 4 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art of record that is cited as of interest is presented on the form-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiley Stoner whose telephone number is (571) 272-1183. The examiner can normally be reached on Monday-Thursday (7:30 a.m. to 6:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on Monday-Friday at (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KILEY S. STONER
PRIMARY EXAMINER

Kiley Stoner 2/28/05